

on individual study as a retrogressive step and goes so far as to say that unless management training by teletution can be done by the study group methods, the effectiveness of the training will NOT be significant for a large proportion of the students. We are therefore extremely loath to undertake any type of training programme which does not incorporate the study group method.

This leads to the second major strength of the SBL's methods of management training—expertise in the Study Group Method.

#### *Expertise in Study Group Training*

The SBL has had eight years experience in developing training courses by the study group method. Training via study groups is not a matter of saying: 'Let there be a group', and leaving the matter at that. Such a study group must be given structured assignments, which systematically lead the group through the study material, and a balance must be struck between

GROUP work and INDIVIDUAL assignments.

A well-planned training programme based on the study group method will achieve the following results:

1. The expertise of ALL members of the study group is utilised—generally the group is interdisciplinary, containing, say, engineers, accountants, mining and personnel managers. The result is that the more expert participants in a particular subject FORMALLY assist the inexpert group members. This effectively removes many of the frustrations of individual study.
2. A much larger workload can be handled as a result.
3. Particularly if the group comes from a single company, a significant cross-fertilisation of ideas takes place and mutual understanding is enhanced. Group members come to really understand the difficulties under which their peers work and to

appreciate where they can assist one another. Furthermore, the relevance of the theory which the group members learn is seen and appreciated in the context of the work situation as a whole, and not in the context of a functionally isolated department.

4. The members of the group are compelled to work as a management team in solving problems. This is carried over into the work situation.
5. The existence of the group acts as a powerful motivation booster to persist with the course. The existence of the group disciplines the group member to stick to his studies, since other group members depend on him and vice versa. The competition BETWEEN groups means that each group as a whole puts in a great more effect than they would do if they studied individually.

## Contribution to the above paper

by R. T. Muller\* (Visitor)

Demands are being made and pressure is being brought to bear on employers in South Africa to narrow or eliminate the wage gap between their White and Black employees. Few thinking people will dispute the fact that a constant improvement in the wages of Black personnel is essential, but this cannot be done merely by a redistribution of income in South Africa. If this were to happen, some of the Bantu at present employed may become unemployed so that those remaining in employment can earn considerably better wages. What is required is constant and rapid economic growth, but this will be possible only if there is an equivalent increase in the productivity of personnel.

The enhancement of the productivity of Black, as well as White,

workers means, among other possibilities, the restructuring of jobs. It means that jobs more advanced in content than those at present done by Bantu will have to be done by Black employees, and it calls for an organizational structure that will allow better job opportunities for Blacks.

The role of training in increasing productivity is reflected by the fact that any employee faced with a job of which the content has been changed will, if he is to be used effectively, have to be trained so that he can handle all aspects of his newly structured position.

The use of more or better machines and new or better systems for bringing about increased productivity emphasizes the fact that new knowledge, new methods of operating, and insight into maintenance will be required.

The better and more efficient use

of our Black labour force necessitates efforts on our part to get more and more of them literate and to a stage where they can at least speak English or Afrikaans. This means that much attention will have to be given to training in communication. Fanakalo is limited and inadequate for communication in management and technical concepts other than on a very elementary level.

People who have been used to having money just to meet their daily needs may find, with the gradual increase of salaries, that they have more than they require for their daily subsistence. By the time Black employees reach this stage, they should have received tuition so that savings accounts, fixed deposits, and insurance mean something to them. They should be at the stage where they see the need for providing for the education of their children. They should understand concepts like

\*Group Personnel Officer, Union Corporation Group of Mines.

pension funds and inflation. If not, the employer may find new problems confronting his labour force, e.g., excessive use of liquor, absenteeism, and higher turnover.

The aspirations of the Black man, his culture, his beliefs, and how these differ from those of the White employee, will have to be understood, not only by a few anthropologists, but by every White supervisor, if we hope to motivate and use our Black employees to the full. This knowledge will have to be given to White supervisors during training courses and as they develop for more senior positions.

There is, of course, the possibility that we may emphasize the training and development of the Black man to such an extent that we forget to pay as much attention to the training of the White employee. We must not forget that changes in the content of the Black employee's job directly or indirectly affect some of the White employees' jobs. If we are to reap the benefit of the restructuring of the Black man's job, we shall have to train the White supervisor on how he can use the Black man to make him more productive. A case in point is the engineering aide. Training is essential not only for showing the aide how to deal with the content of his job, but it is as important that we train the White artisan on how to use his aides. The creation of the aide job has added a new dimension to the artisan job, in that the artisan now also becomes a supervisor. The training of our apprentices should therefore be modified to cater for the new dimension in an artisan's job.

Restructuring of the jobs of Black mineworkers will be of little use to us, unless the White miner insists that his Black subordinates adhere to the content of their restructured jobs. Therefore, it is important, if the content of the jobs of a stope gang are changed, that the team as a whole is trained. The miner and shift-boss should be fully involved in this training so that they can utilize their labour in the way catered for by the restructuring.

Advancement of the Black man creates some very real fears in some of our White employees. Fear is very

often created because of ignorance or a lack of understanding. If we want the White employee to accept the fact that Black people will take over parts of jobs, or jobs that are traditionally the preserve of the White man, it is essential that we train the White employees in our companies to handle more advanced jobs so that new opportunities are also created for them. For those Whites who do not have the ability to advance any further, it must be made clear that they will not become unemployed. It is a question of training in a broader sense, in that their minds must be developed to see the broader picture; they must be shown that the economic growth generated by the better utilization of men will also be to their benefit.

A further challenge to our future training is the need to provide every Black and White man with the knowledge and background for his job that will help him to act and make as many decisions as possible on his own. All decisions should be made at as low a level as possible. In this connection it has been shown that learning is faster, and the knowledge obtained can be applied better to new and unfamiliar situations, if trainees understand the principles involved in their jobs. The man who knows the theory behind his work is in a good position to adapt to new problem situations as they arise.

I have only touched on the role of training in increasing productivity, but it should be clear from what I have said that training is tremendously important. In fact, we cannot improve on productivity unless we train extensively.

How should we tackle this problem? Mr Nel suggested in his paper that a central manpower-development organization should be established. I see merit in this suggestion, and the Human Sciences Laboratory of the Chamber of Mines should be asked to investigate the feasibility of such a scheme. The training done by an organization like this will, of course, have to be in job areas common to all groups, and largely on the theoretical content of these jobs.

The task of the Human Sciences Laboratory will initially be to estab-

lish the needs of the mining groups for theoretical training in job areas common to all mining groups. The next step would be to establish what facilities already exist in the country for training at this level.

Mr Nel's suggestion that a central organization like this should provide tuition for employees to man our training centres is a good one. The people who usually man these centres are ex-production officials who will, with the training challenges facing us, have to be given tuition on the techniques of training and the theory of learning, etc. If thoroughly trained in these principles, the training officers will be able to use their initiative to the great advantage of the training function.

Another area in which I feel a central training unit can be of value to the Industry is in the provision of a theoretical background for compound officials. This, and the training function on a mine, are two areas that to my knowledge are not catered for by other institutions to the satisfaction of all the mining companies. An investigation by the Human Sciences Laboratory will reveal the other fields of study for which such a central organization could provide courses.

Figuratively speaking, the suggested central training organization could be seen as a 'mining industry university'. Research in the field of training, and expert advice and assistance for those mines requesting it, could be of great value in meeting the training needs of the Industry.

At this stage, however, I want to warn against the removal of the responsibility for training from the managements of individual mines. The management of every mine, the supervisors down the line, and the heads of departments should see training as one of their major functions. The final stage in any training programme is the guidance and tuition that an employee should receive from his immediate superior. We cannot allow line men to shed their training responsibility. Training will bear fruit only if every man on production realizes the value of training, and if he is prepared to accept the responsibility for it. The training staff of his mine will be

at his disposal to assist him with this.

To impress upon our supervisors the extent to which we expect them to be responsible for training and for seeing that their subordinates receive the right training, we may have to get them to report on their training efforts in the same way as they have to report on their production efforts.

The mining industry should seriously consider the introduction, into the various courses for technical qualifications (e.g., mine overseer's certificate, learner official course,

survey certificate, G.M.T.C. course, and apprentice course), subject matter that will show the students the need for supervisors to take an active part in training, but that will also give them an insight into the techniques of training.

In conclusion, I should like to summarize my views.

- (1) Without effective training, an increase in productivity is unlikely.
- (2) I see merit in the creation of a 'mining industry university', providing the Human Sciences Laboratory can find sufficient

job areas that are common to all mining groups and not yet catered for by other institutions.

- (3) The training centres on mines must continue to provide the theoretical training specific to jobs of that mine, and also practical training. In fact, the training department must become the control point of all training on the mine.
- (4) We must continue stressing the responsibility of heads of departments and production men for the training of their subordinates.

---

## Company affiliates

The following members have been admitted to the Institute as Company Affiliates.

AE & CI Limited.  
Afrox/Dowson and Dobson Limited.  
Amalgamated Collieries of S.A. Limited.  
Apex Mines Limited.  
Associated Manganese Mines of S.A. Limited.  
Blackwood Hodge (S.A.) Limited.  
Blyvooruitzicht G.M. Co. Ltd.  
Boart & Hard Metal Products S.A. Limited.  
Bracken Mines Limited.  
Buffelsfontein G.M. Co. Limited.  
Cape Asbestos South Africa (Pty) Ltd.  
Compair S.A. (Pty) Limited.  
Consolidated Murchison (Tvl) Goldfields & Development Co. Limited.  
Doornfontein G.M. Co. Limited.  
Durban Roodepoort Deep Limited.  
East Driefontein G.M. Co. Limited.  
East Rand Prop. Mines Limited.  
Free State Saaiplaas G.M. Co. Limited.  
Fraser & Chalmers S.A. (Pty) Limited.  
Gardner-Denver Co. Africa (Pty) Ltd.  
Goldfields of S.A. Limited.  
The Grootvlei (Pty) Mines Limited.

Harmony Gold Mining Co. Limited.  
Hartebeesfontein G.M. Co. Limited.  
Hewitt-Robins-Denver (Pty) Limited.  
Highveld Steel and Vanadium Corporation Limited.  
Hudemco (Pty) Limited.  
Impala Platinum Limited.  
Ingersoll Rand Co. S.A. (Pty) Ltd.  
James Sydney & Company (Pty) Limited.  
Kinross Mines Limited.  
Kloof Gold Mining Co. Limited.  
Lennings Holdings Limited.  
Leslie G.M. Limited.  
Libanon G.M. Co. Limited.  
Lonrho S.A. Limited.  
Lorraine Gold Mines Limited.  
Marievale Consolidated Mines Limited.  
Matte Smelters (Pty) Limited.  
Northern Lime Co. Limited.  
O'okiep Copper Company Limited.  
Palabora Mining Co. Limited.  
Placer Development S.A. (Pty) Ltd.  
President Steyn G.M. Co. Limited.  
Pretoria Portland Cement Co. Limited.  
Prieska Copper Mines (Pty) Limited.  
Rand Mines Limited.

Rooiberg Minerals Development Co. Limited.  
Rustenburg Platinum Mines Limited (Union Section).  
Rustenburg Platinum Mines Limited (Rustenburg Section).  
St. Helena Gold Mines Limited.  
Shaft Sinkers (Pty) Limited.  
S.A. Land Exploration Co. Limited.  
Stilfontein G.M. Co. Limited.  
The Griqualand Exploration and Finance Co. Limited.  
The Messina (Transvaal) Development Co. Limited.  
The Steel Engineering Co. Ltd.  
Trans-Natal Coal Corporation Limited.  
Tvl Cons. Land & Exploration Co.  
Tsumeb Corp. Limited.  
Union Corporation Limited.  
Vaal Reefs Exploration & Mining Co. Limited.  
Venterspost G.M. Co. Limited.  
Vergenoeg Mining Co. (Pty) Limited.  
Vlakfontein G.M. Co. Limited.  
Welkom Gold Mining Co. Limited.  
West Driefontein G.M. Co. Limited.  
Western Deep Levels Limited.  
Western Holdings Limited.  
Winkelhaak Mines Limited.